

(No Model.)

A. MEKENNEY.

PLOW.

No. 277,047.

Patented May 8, 1883.

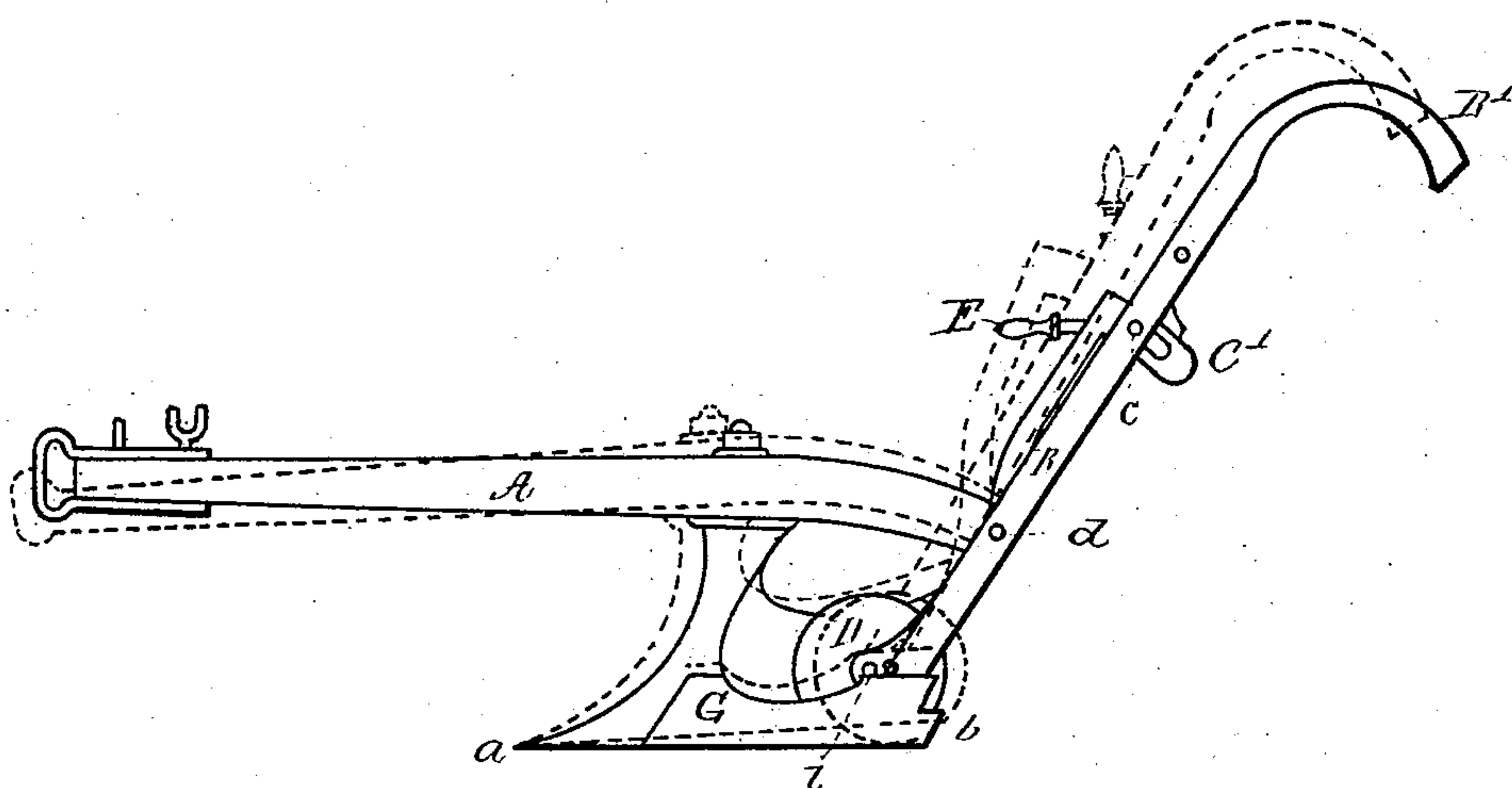


Fig. 1-

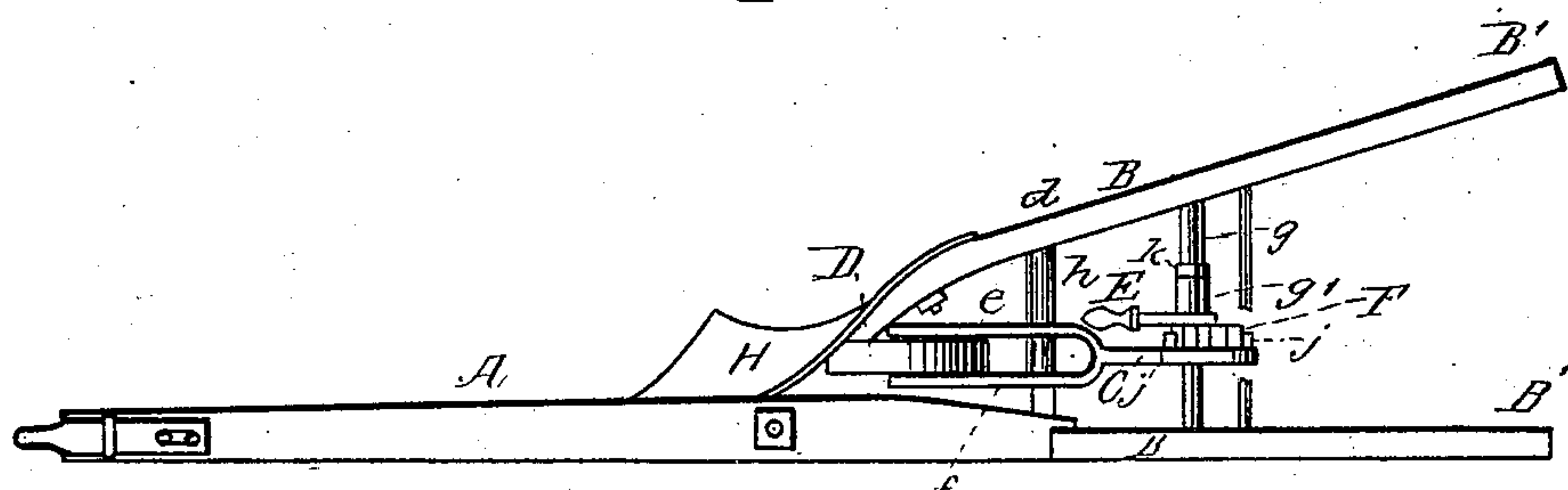


Fig. 2-

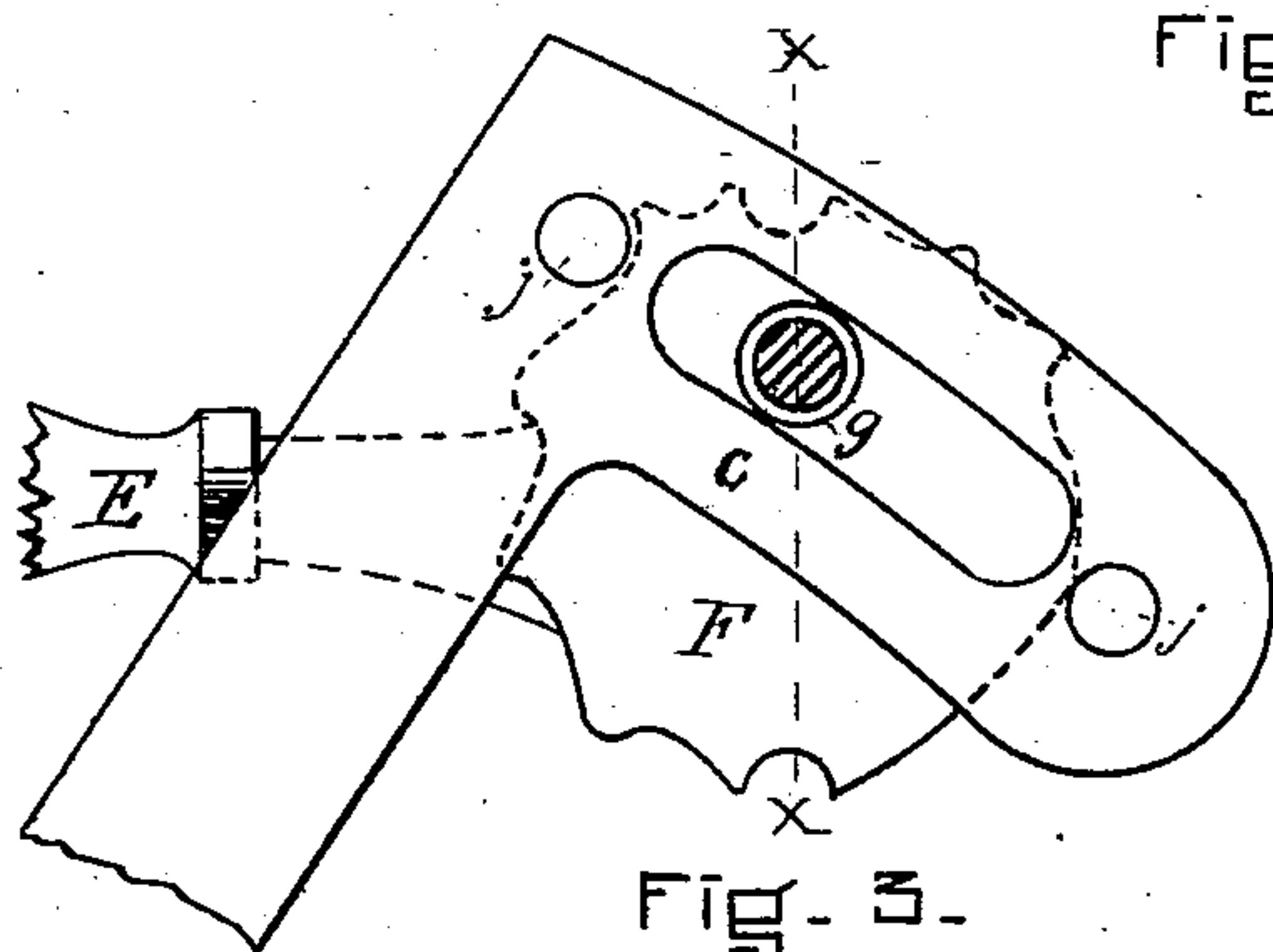


Fig. 3-

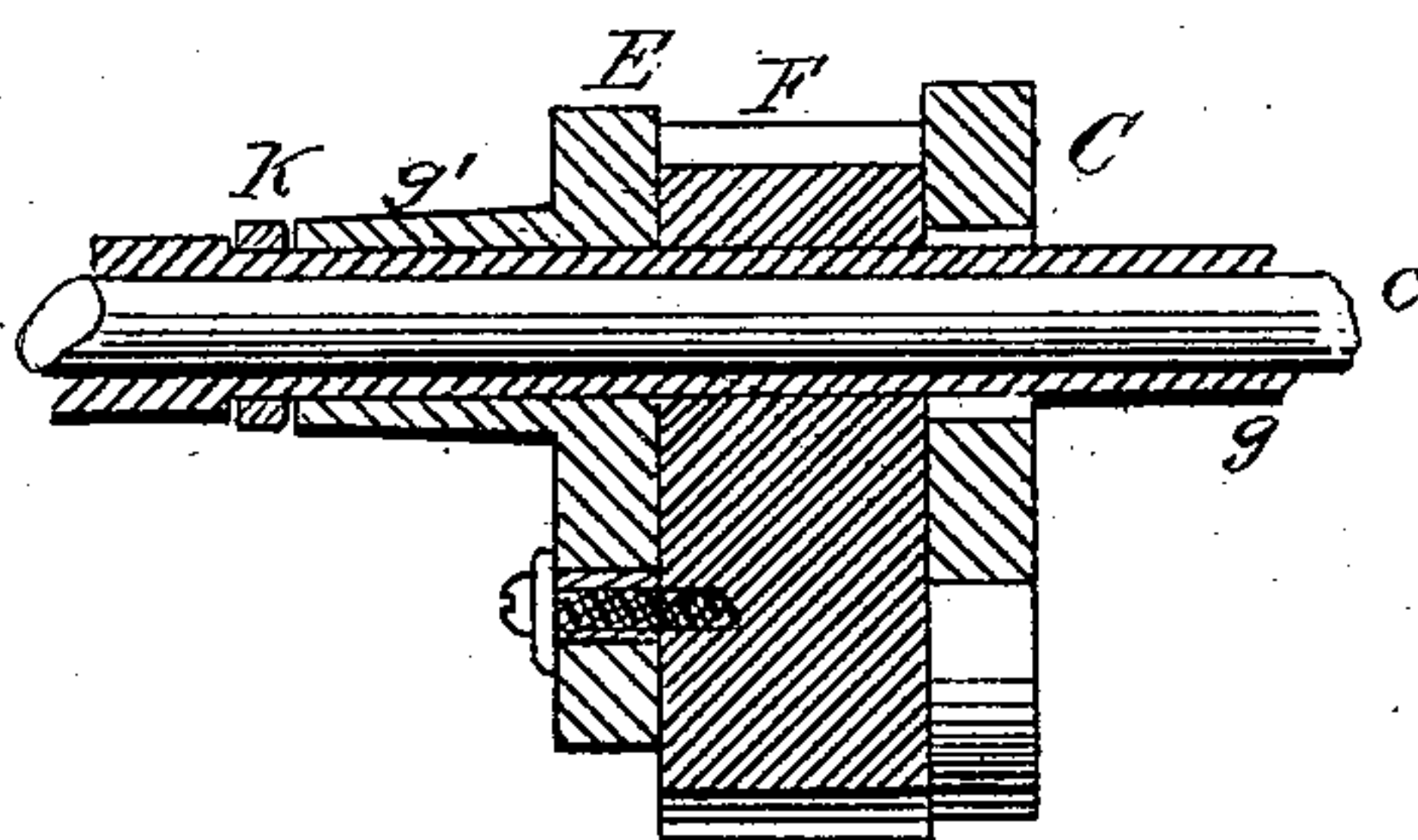


Fig. 4-

WITNESSES

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PLOW.

SPECIFICATION forming part of Letters Patent No. 277,047, dated May 8, 1883.

Application filed January 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALEND0 MEKENNEY, a citizen of the United States, residing at Middleborough, in the county of Plymouth, in the State of Massachusetts, have invented Improvements in Plows, of which the following is a specification.

My invention consists in providing an adjustable wheel which runs between the land-side and the mold-board of the plow in the furrow made by the plow, and has peculiar mechanism for adjusting said wheel; and the object of my invention is, first, by the mechanism shown to save the wear of the bottom of the plowshare when it is being drawn to and from the field and other places when not in actual plowing, and also lessen friction in the furrow; second, by means of said mechanism to adjust the plow-beam in uneven ground at any moment without stopping the team, so that whether the plow runs up or down hill, even depth of furrow can be secured.

That others skilled in the art may better understand the nature and use of my invention, reference is made to the accompanying drawings, which are made a part of this specification, in which—

Figure 1 is a side elevation. Fig. 2 is a plan. Fig. 3 is an enlarged view of the upper end of the pronged lever, the left standard being removed in order to show the slightly-curved slot and cross-section of the round passing through said slot, and to show a part of the cam and lever. Fig. 4 is a vertical longitudinal section of said round and its sleeve and a vertical section of the notched cam and cam-lever secured to the cam on one side, and a section of the slotted curved projection of the lever on the other side of the notched cam.

The letter A represents the plow-beam, B the standards, and B' the handles; C, the pronged lever, and C' its slotted curved projection; D, the wheel; E, the cam-lever; F, the notched cam; G, landside of the plow; H, mold-board of plow; a, the plow-point; b, plow-heel; c, upper round or cross-piece; d, lower round or cross-piece; e, right prong, and f left prong, of lever C; g, sleeve of upper round, and g' short sleeve of same; h, sleeve on lower round; i, axle of wheel; j, pins in the lever projection C'; k, a ring or

raised portion of the sleeve g. (See Figs. 2 and 4.)

Wheels have long been used in connection with plows for the purpose of diminishing friction or cutting uniform furrows, and in some soils to great advantage; but the difficulty hitherto has been in so adjusting and managing the same as to render them of practical importance, and even a necessity to a good plow. By the simple mechanism herein described I have attained this result.

Fig. 1 in the accompanying drawings gives a side view of an ordinary plow, with a portion of a pronged lever, C, between and nearly parallel with the standards B, and its curved projection C' at nearly right angles to said standards. Fig. 2 is a plan in which all the exterior mechanism employed is clearly seen—the plow-beam, the standards, the mold-board, and rounds and handles, as in ordinary plows. In Fig. 1 is seen a round still higher than round c, and this is to give additional strength to the standards. The rounds c and d are of iron. The wheel runs in the furrow and rotates parallel with the landside of the plow upon an axle, one end of which is seen in Fig. 1 at i. The prongs of the lever, e and f, stride the wheel, and the axle i passes through the wheel, and has its bearings in the prongs, as shown in Fig. 2. The round d goes through the standards and the prongs and the plow-beam, and is secured by nut-screws on the outside of the standards, (see Figs. 1 and 2,) to keep the prongs in one position. A sleeve, h, is placed upon round d between the prong e and the standard. The wheel-lever, extending upward parallel with the standards to within easy reach of the hand, has at its end a curved projection, having therein a slot, through which goes the round c, (see Figs. 1 and 3,) which round is made of iron, and is secured by nut-screws on the outside of the standards. Upon this round is a movable sleeve, g. Upon said sleeve is a notched cam, F, to which cam on the right side is a cam-lever, E, having a projection, g'. Said lever is secured to the cam by a screw. (Shown in Fig. 4.) In the lever projection C' will be observed, at the ends of the slot on opposite sides of the cam, pins j, (see Figs. 2 and 3,) which fit into the cam-notches.

In raising the cam-lever E from the position shown in Fig. 1 to the position shown in the dotted lines on said figure, the pins *j* slide along over the notches and hold at whatever point the lever is raised. The projection C' also slides along on the round *c* by the curved slot the distance the lever is raised, and remains fast when the lever is stopped. It will be observed that when the cam-lever points downward, as shown in Fig. 1, the wheel but slightly rests upon the ground, and in this position would lessen friction somewhat in plowing; but raise the cam-lever a notch, the wheel-lever and wheel are pushed downward, and the heel of the plow is raised. Raise the cam-lever to the position shown by the dotted lines, Fig. 1, and the heel will be raised correspondingly, and the whole plow thrown forward in the position of the dotted lines. The draft end of the plow-beam and the plow-point will be depressed, and the plow will make a deeper furrow. Thus in plowing up or down a hill the plow-point with the same length of draft-chain tends to sink deeper in the ground in the one case or rise out of the ground in the other case; also in new or sward land it is somewhat difficult for the plowman to keep the point of the plow in the ground with short length of draft-chain; but in such case with my invention, by raising the cam-lever, as shown, the plow-point would be depressed at once, with but a slight movement of the hand; and the adjustment of the wheel can be effected by one hand while the plow is being drawn along. So, in drawing the plow, when not in the furrow, from barn to field, or from one part of the field to another, or in pulling the plow backward for a fresh hold when it has been thrown out of the ground by some obstruction, by raising the plow-heel on the wheel the plow is easily managed.

Hitherto wheels applied to plows have been attached to said plows by arms or levers secured fixedly and at right angles to said beam, or wheels have been made to revolve on fixed axles set within the angle of the share. Such positions of the wheels lift up the plow and decrease friction to some extent. In my invention the lever carrying the wheels is at an angle the same or nearly the same as are the standards to the beam, so that not only friction on the bottom of the furrow is decreased, but lifting-power is added, as in raising the handles of a wheelbarrow. The wheel is, moreover, adjustable at any moment by one hand of the plowman without stopping or letting go the other handle.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a plow and running between the mold-board and the landside of the plow, the combination of the wheel D, movable on an axle *i*, the forked lever C, having a slotted curved projection, C', the standards B, the rounds *c* and *d*, the cam F, having pins *j*, and the cam-lever E, substantially in the manner and for the purpose described.

2. The combination of the lever C, having at one end a wheel, D, on its axle *i*, and at its other end a curved slotted projection, C', the round *d*, provided with a sleeve, *g*, the cam F, secured to said sleeve *g*, and having pins *j*, the cam-lever E, and the standards B, substantially as shown, and for the purpose described.

ALENDO MEKENNEY.

Witnesses:

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